

Broadband Availability in America

*With Rural Americans Looking for High-Speed Services,
Adequate Broadband Speeds Remain Out of Reach for Many*

Federal Communications Commission
January 30, 2015

“High-speed Internet access has become fundamental to modern life, whether we are on the job, at home, or going to school. Broadband connectivity can overcome geographic isolation and put a world of information and economic opportunity at the fingertips of citizens in even the most remote communities.”

Tom Wheeler, Chairman
Federal Communications Commission

Summary

Access to robust broadband service is a necessity in today's world for jobs, education, civic engagement and economic competitiveness. Yet many American homes and businesses – especially those in rural communities – do not currently have access to broadband at the speeds necessary to meet these modern needs.

An FCC analysis of data shows that as of December 2013, 53 percent of rural Americans do not have access to service delivering broadband speeds of 25 Mbps for downloads and 3 Mbps for uploads. Nationwide, 55 million Americans lack access to this service, or 17 percent of all Americans.

FCC research shows that these speeds are necessary today to accommodate the increasingly bandwidth-intensive demands from homes and businesses. In today's world, bandwidth-intensive video is the dominant broadband application. Indeed, streaming video and audio comprises 63 percent of downstream traffic with each video stream typically requiring from 5 to 25 Mbps.

Today's users need more than 10 Mbps to, for example, participate in an online class, download files, and stream a movie at the same time within one household; to view two high definition videos on separate devices at the same time; or to stream one 4K (aka UltraHD) television service. The average American household with children has more than four people living in it and using seven Internet-connected devices on a shared, broadband network.

Demand for 25 Mbps/3 Mbps broadband service is the same regardless of location: when rural Americans have access to this service, they adopt it at the same rate as urban Americans. Yet it is clear that deployment of advanced telecommunications services is lagging far behind in rural areas. Charts provided in this report below demonstrate this gap, as well as variations in availability from state to state.

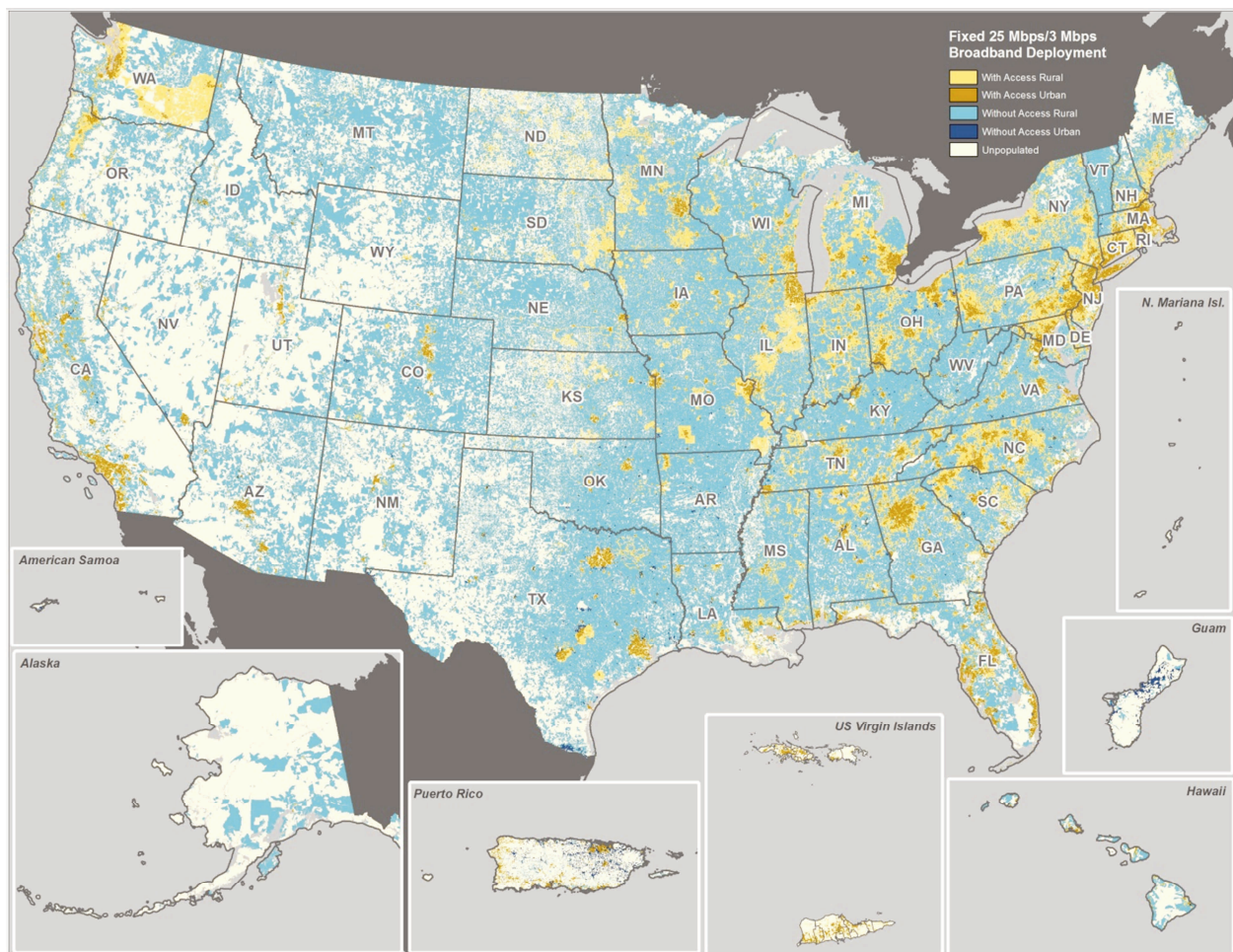
Findings

- 17 percent of all Americans (55 million people) lack access to 25 Mbps/3 Mbps service.
- 53 percent of rural Americans (22 million people) lack access to 25 Mbps/3 Mbps.
 - By contrast, only 8 percent of urban Americans lack access to 25 Mbps/3 Mbps broadband.
 - Rural America continues to be underserved at all speeds: 20 percent lack access even to service at 4 Mbps/1 Mbps, down only 1 percent from 2011, and 31 percent lack access to 10 Mbps/1 Mbps, down only 4 percent from 2011.
- 63 percent of Americans living on Tribal lands (2.5 million people) lack access to 25 Mbps/3 Mbps broadband
 - 85 percent living in rural areas of Tribal lands (1.7 million people) lack access.
- 63 percent of Americans living in U.S. territories (2.6 million people) lack access to 25 Mbps/3 Mbps broadband.
 - 79 percent of those living in rural territorial areas (880,000 people) lack access.
- Overall, the gap in availability of broadband at 25/3 closed by only 3 percentage points last year, from 20% lacking access in 2012 to 17% in 2013.
- Americans living in rural and urban areas adopt broadband at similar rates where 25 Mbps/ 3 Mbps service is available, 28 percent in rural areas and 30 percent in urban areas.
- Approximately 35 percent of schools lack access to fiber, and thus likely lack access to broadband at the Commission's shorter term benchmark (adopted in its July 2014 E-rate

Modernization Order) of 100 Mbps per 1,000 users, and even fewer have access at the long term goal of 1 Gbps per 1,000 users.

- The average household has seven Internet-connected devices, according to Verizon and comments filed by the Fiber to the Home Council.
- Video is the dominant broadband application, and is the most bandwidth-intensive.
- Streaming video and audio comprises 63 percent of downstream traffic, according to the 2014 Sandvine Global Internet Phenomena Report, with each video stream typically requiring from 5-25 Mbps.
- Consumer demand for 25/3 broadband more than quadrupled from 2011 to 2013, from 7 percent to 29 percent of consumers adopting where it is available.
- In the states with the least population density – Alaska, Wyoming, Montana, North Dakota, South Dakota and New Mexico – 37 percent of the population lack access to 25/3.
- In the states with the most population density – New Jersey, Rhode Island, Massachusetts, Connecticut, Maryland and Delaware – only 3.4 percent of the population lacks access to 25/3 service.
 - *Americans residing in the states with the lowest population density are 10 times more likely to lack access than Americans residing in the states with the highest density.*

25 Mbps/3 Mbps Broadband Deployment Map



**Americans in Urban and Rural Areas Without Access to
25 Mbps/3 Mbps Broadband by State & U.S. Territory
(population in millions)**

	All Areas			Urban Areas			Rural Areas		
	Pop.	Pop. Without Access	% of Pop.	Pop.	Pop. Without Access	% of Pop.	Pop.	Pop. Without Access	% of Pop.
United States	321.325	54.560	17%	260.007	21.932	8%	61.318	32.628	53%
All States & the District of Columbia	317.264	51.988	16%	257.061	20.240	8%	60.203	31.748	53%
Alabama	4.880	1.701	35%	2.898	0.588	20%	1.982	1.113	56%
Alaska	0.740	0.285	38%	0.493	0.086	17%	0.247	0.199	81%
Arizona	6.751	1.162	17%	6.079	0.622	10%	0.671	0.540	80%
Arkansas	2.992	1.751	59%	1.704	0.668	39%	1.288	1.084	84%
California	38.338	2.601	7%	36.451	1.335	4%	1.888	1.266	67%
Colorado	5.262	0.943	18%	4.553	0.438	10%	0.709	0.504	71%
Connecticut	3.619	0.050	1%	3.184	0.029	1%	0.435	0.021	5%
Delaware	0.931	0.030	3%	0.775	0.010	1%	0.156	0.020	13%
District of Columbia	0.622	0.009	2%	0.622	0.009	2%			
Florida	19.631	1.278	7%	17.903	0.571	3%	1.728	0.708	41%
Georgia	10.129	1.403	14%	7.632	0.303	4%	2.497	1.100	44%
Hawaii	1.406	0.057	4%	1.295	0.007	1%	0.111	0.050	45%
Idaho	1.645	0.820	50%	1.174	0.446	38%	0.472	0.374	79%
Illinois	12.958	0.710	5%	11.499	0.139	1%	1.459	0.570	39%
Indiana	6.606	0.947	14%	4.816	0.160	3%	1.790	0.787	44%
Iowa	3.090	0.761	25%	2.009	0.109	5%	1.081	0.652	60%
Kansas	2.908	0.794	27%	2.190	0.282	13%	0.718	0.512	71%
Kentucky	4.435	1.767	40%	2.616	0.445	17%	1.819	1.322	73%
Louisiana	4.584	1.325	29%	3.348	0.531	16%	1.237	0.793	64%
Maine	1.340	0.291	22%	0.511	0.033	6%	0.829	0.258	31%
Maryland	5.925	0.418	7%	5.168	0.216	4%	0.757	0.202	27%

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Massachusetts	6.624	0.238	4%	6.092	0.140	2%	0.532	0.098	18%
Michigan	9.858	1.250	13%	7.344	0.282	4%	2.514	0.968	39%
Minnesota	5.424	0.725	13%	4.000	0.055	1%	1.424	0.669	47%
Mississippi	3.006	1.196	40%	1.483	0.261	18%	1.523	0.935	61%
Missouri	6.103	1.792	29%	4.307	0.523	12%	1.796	1.269	71%
Montana	1.018	0.882	87%	0.574	0.482	84%	0.444	0.400	90%
Nebraska	1.867	0.502	27%	1.390	0.154	11%	0.477	0.349	73%
Nevada	2.876	0.173	6%	2.722	0.075	3%	0.155	0.098	64%
New Hampshire	1.335	0.228	17%	0.801	0.037	5%	0.534	0.191	36%
New Jersey	8.900	0.172	2%	8.430	0.112	1%	0.470	0.060	13%
New Mexico	2.136	0.643	30%	1.672	0.287	17%	0.465	0.356	77%
New York	19.531	0.518	3%	17.199	0.022	0%	2.333	0.496	21%
North Carolina	9.977	1.446	14%	6.671	0.292	4%	3.307	1.154	35%
North Dakota	0.690	0.102	15%	0.427	0.004	1%	0.263	0.098	37%
Ohio	11.587	1.935	17%	9.053	0.705	8%	2.535	1.230	49%
Oklahoma	3.856	1.882	49%	2.563	0.738	29%	1.293	1.145	89%
Oregon	3.957	0.276	7%	3.228	0.029	1%	0.730	0.248	34%
Pennsylvania	12.842	1.695	13%	10.111	0.717	7%	2.731	0.979	36%
Rhode Island	1.052	0.007	1%	0.953	0.000	0%	0.098	0.006	6%
South Carolina	4.812	1.085	23%	3.229	0.387	12%	1.583	0.698	44%
South Dakota	0.837	0.160	19%	0.489	0.003	1%	0.348	0.157	45%
Tennessee	6.547	1.148	18%	4.369	0.159	4%	2.177	0.989	45%
Texas	26.549	9.987	38%	22.585	6.653	29%	3.964	3.334	84%

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Utah	2.931	0.149	5%	2.662	0.044	2%	0.268	0.105	39%
Vermont	0.630	0.502	80%	0.247	0.157	63%	0.383	0.346	90%
Virginia	8.290	1.734	21%	6.295	0.453	7%	1.995	1.281	64%
Washington	6.998	0.277	4%	5.887	0.039	1%	1.111	0.238	21%
West Virginia	1.869	1.042	56%	0.909	0.328	36%	0.960	0.714	74%
Wisconsin	5.783	0.962	17%	4.071	0.052	1%	1.712	0.910	53%
Wyoming	0.585	0.175	30%	0.378	0.023	6%	0.207	0.152	74%
U.S. Territories	4.061	2.572	63%	2.946	1.692	57%	1.116	0.880	79%
American Samoa	0.055	0.055	100%	0.042	0.042	100%	0.013	0.013	100%
Guam	0.160	0.160	100%	0.108	0.108	100%	0.052	0.052	100%
Northern Mariana Islands	0.051	0.051	100%	0.034	0.034	100%	0.018	0.018	100%
Puerto Rico	3.690	2.259	61%	2.719	1.506	55%	0.970	0.752	78%
U.S. Virgin Islands	0.105	0.047	45%	0.043	0.002	5%	0.062	0.045	72%